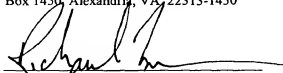


SOLE INVENTOR

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Richard Zimmermann

# **APPLICATION FOR UNITED STATES LETTERS PATENT SPECIFICATION**

TO ALL WHOM IT MAY CONCERN:

Be it known that I, Martha Kelsey, a citizen of the United States of  
America, residing at 2106 Silver Lakes Circle, P.O. Box 788, Fairfield, Iowa 52556,  
have invented a new and useful **ADJUSTABLE HAIR ROLLER**, of which the  
following is a specification.

## **ADJUSTABLE HAIR ROLLER**

### **Related Application Data**

5       The present application is a non-provisional application based on, and  
claiming the priority benefit of, co-pending U.S. provisional application Serial No.  
60/416,811, which was filed on October 8, 2002, and is expressly incorporated by  
reference herein.

### **Field of the Disclosure**

10       The present disclosure generally relates to an adjustable hair roller and, more  
particularly, to a hair roller able to change from a first shape to a second shape.

### **Background of the Disclosure**

15       Hair rollers are known to be used to create curls in one's hair. There are many  
types of rollers that have been used in the past, and there are many ways the various  
rollers are attached to the hair or the head of an individual. For example, rollers are  
available having small and large diameters. Such rollers may have either a hollow or  
a solid core. Rollers are also available in various materials such as plastic, metal, or  
foam, and some rollers have been adapted to function with the use of heat, such as  
20       from a hairdryer or from heat created by the rollers themselves. Similarly, many  
means have been used to attach the rollers to the hair or head of the individual, such  
as clasps that are integral to the roller, bobby pins, and/or other clip-type devices.

Even though the above rollers have been used in the past, there are inherent limitations that these rollers possess. For example, when the user desires to achieve different types of bangs, the user has to use various devices and/or skills to achieve the desired look. The user may desire to have bangs that are flat or puffy, or may  
5     desire to have bangs that are closer or farther away from the user's forehead. The user, to achieve the different looks, may use a device such as a curling iron, round roller, blow dryer, and/or chemicals to achieve the desired look. Similarly, it may take the user large amounts of tedious, frustrating, and all-consuming time to create the desired shape. In some circumstances the user may be unable to achieve the  
10    desired look at all.

### **Summary of the Disclosure**

In accordance with one aspect of the disclosure among others, an adjustable hair roller is disclosed. The adjustable hair roller includes a body and an  
15    adjustment mechanism. The body may include an outer surface adapted to engage with strands of hair, and an inner surface having an adjustment mechanism. The adjustment mechanism may include a first portion and a second portion, disposed from a first half and second half of the inner surface of the body, respectively. The first and second portions may be adapted to engage with one another, thereby  
20    changing the shape of the roller from a first shape to a second shape.

### **Brief Description of the Drawings**

Fig. 1 is an isometric view of an adjustable hair roller as constructed in accordance with the teachings of the disclosure;

Fig. 2 is a front view of the adjustable hair roller of Fig. 1 with the adjustment mechanism engaged;

Fig. 3 is a front view of the adjustable hair roller of Fig. 1 with the adjustment mechanism further engaged; and

Figure 4 is an isometric view of the adjustable hair roller of Fig. 1 as worn by a user.

While the method and device described herein are susceptible to various modifications and alternative constructions, certain illustrative embodiments thereof have been shown in the drawings and will be described below in detail. It should be understood, however, that there is no intention to limit the invention to the specific forms disclosed, but on the contrary, the intention is to cover all modifications, alternative constructions, and equivalents falling within the spirit and scope of the invention and the appended claims.

### **Detailed Description**

Referring now to the drawings and with specific reference to Fig. 1, an adjustable roller constructed in accordance with the teachings of the disclosure is generally depicted by reference numeral 20. As shown therein, the adjustable roller 20 includes a body 22 and an adjustment mechanism 24.

In one exemplary embodiment, the body 22 may be of a generally cylindrical shape including an inner surface 26 and an outer surface 28. The inner surface 26 of the body 22 and the outer surface 28 of the body 22 may be constructed from one or more materials. The inner surface 26 of the body 22 may, for example, be constructed from a semi-flexible or semi-rigid plastic material, to give substance and/or form to the body 22. The outer surface 28 of the body 22 may be constructed from a material adapted to engage with the user's hair, such as foam, Velcro®, or the like.

In one exemplary embodiment, the adjustment mechanism 24 may be a click and lock type mechanism having a first portion 30 and a second portion 32. More specifically, as used herein, a click and lock mechanism encompasses all mechanisms having a first and second portion, in which the first portion 30 is adapted to engage with the second portion 32 in varying degrees, and in which the first portion 30 will remain in the same degree of engagement relative to the second portion 32 until adjusted by the user. The adjustment mechanism 24 may extend an entire length of the body 22, or may only extend a partial length. Similarly, the adjustment mechanism 24 may be constructed in multiple sections along the body 22.

In the embodiment shown in Figs. 1-3, the first portion 30 of the adjustment mechanism 24 may include an enlarged cylindrical end portion 34 disposed at an end of a substantially planar portion 36, and the second portion 32 may include a clasp portion 38 having a plurality of notches 40, such as for example notches A, B, C and D, as seen in Fig. 1. The clasp portion 38 may further include a first section 42, a second section 44 and an opening 46, wherein each of the first and second sections 42, 44 have an inner surface 48 and an outer surface 50, and wherein the plurality of

notches 40 may be disposed in an area defined by the inner surface 48 of the sections 42, 44 and are adapted to engage with the end portion 34.

More specifically, the planar portion 36 may be fixedly attached to the inner portion 26 of the body 22. The end portion 34 may extend inwardly toward the center of the body 22, and may be located at the end of the planar portion 36 toward the center of the body 22. The planar portion 36 may be fixedly attached to the body 22 near the center of a first half 60 of the body 22. The clasp portion 38 may be fixedly attached to the inner portion 26 of the body 22, extend inwardly toward the center of the body 22, such that the first and second sections 42, 44 are parallel to each other, and such that the opening 46 is located toward the center of the body 22. The clasp portion 38 may be fixedly attached to the body 22 near the center of a second half 62 of the body 22.

The above exemplary embodiments may include many variations thereof, thereby creating additional and/or alternative features. For example, the adjustment mechanism 24 is not limited to the embodiments disclosed above, but may be any adjustment mechanism 24 adaptable to lock and change the shape (i.e. the cross-section perpendicular to the longitudinal axis) of the body 22. For example, the adjustment mechanism 24 may be any type of mechanism having a key and a way, a ratchet type mechanism, a latch and key mechanism, and opposing teeth or hooks that can be engaged and disengaged.

In operation, the adjustable roller 20 may be used to achieve a variety of shapes of curls, including, but not limited to, round and oval. In one exemplary embodiment, the user may change the type of curl by changing a shape of the body 22

from a first shape to a second shape. More specifically, as shown in Fig. 1, the body 22 has a substantially round shape, such that the outer surface 28 of the body 22 is basically round, at which time the cylindrical end portion 34 may be secured in notch A. To change the shape, as shown in Figs. 2 and 3, the user may squeeze or pinch the outer surface 28 of body 22 near the center of the first and second halves 60, 62 together, thereby forcing the center of the halves 60, 62 toward each other and changing the shape of the body 22 to oval. As the body 22 is squeezed or pinched with enough force, the end portion 34 may move from notch A to notch B, as shown in Fig. 2. If further forced, the end portion 34 may move to notch C, as shown in Fig. 3, etc.

Once the end portion 34 is engaged in one of the notches 40, the end portion 34 may remain in the specific notch until moved by the user. More specifically, as the user forces the end portion 34 from notch A to notch B, the first and second sections 42, 44 may bend toward the outsides of the sections 42, 44 respectively, thereby allowing passage of the end portion 34 between the notches 40. Similarly, once the end portion 34 is located in one of the notches 40, the resiliency of the first and second sections 42, 44 may entrap the end portion 34 in the notch until the force of the user causes the end portion 34 to overcome the resiliency of the first and second sections 42, 44.

The user may adjust the adjustable roller 20 to the desired shape before, during and/or after the adjustable roller 20 has been wound around with strands of hair 46. As shown in Fig. 4, the user may wind the strands of hair 46 around the adjustable roller 20, and then secure the adjustable roller 20 to the head or strands of

hair 46 of the user. The adjustable roller 20 may be secured by winding the strands of hair 46 tightly around the adjustable roller 20, or by using securement means (not shown) such as clips, bobby pins, rubber bands, or any other suitable securement means able to accomplish the intended purpose.

5           In one exemplary embodiment, the user may anytime before, after and/or during the winding of the strands of hair around the roller adjustable roller 20, wet the hair with water and/or any hair styling product to easier manipulate the hair and/or to add a desired quality to the hair, such as body, hold, softness, volume, aroma, shine, lack of frizz, etc.

10           While the foregoing detailed description has been described with reference to specific examples, which are intended to be illustrative only and not to be limiting of the disclosure, it will be apparent to those of ordinary skill in the art that changes, additions or deletions may be made to the disclosed embodiments without departing from the spirit and scope of the invention.